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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,617

08/16/2006

Dietrich Scherzer

12810-00339-US1

8676

30678

7590

08/28/2008

CONNOLLY BOVE LODGE & HUTZ LLP

1875 EYE STREET, N.W.

SUITE 1100

WASHINGTON, DC 20006

EXAMINER

HAUTH, GALEN H

ART UNIT

PAPER NUMBER

4111

MAIL DATE

DELIVERY MODE

08/28/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,617	<b>Applicant(s)</b> SCHERZER ET AL.	
	<b>Examiner</b> GALEN HAUTH	<b>Art Unit</b> 4111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) 23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/16/2006</u> .                                              | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of claims 13-22 in the reply filed on 08/12/2008 is acknowledged. Claims 23 and 24 are withdrawn from consideration.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13, 15, 16, 17, 20, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ramsey (Pub No 2003/0068485).
  - a. With regards to claim 13, Ramsey teaches a method for producing foam boards of polystyrene (abstract) that contain 5 to 10% by weight fiberglass filler (¶ 0008) and wherein the polystyrene is copolymerized with acrylonitrile (¶ 0016), mixed with a blowing agent, and foamed all using an extruder (¶ 0021). Ramsey also teaches using wollastonite (wollastonite is a silicate) as filler in the foam board (abstract).
  - b. With regards to claim 15, Ramsey teaches using glass fibers (abstract, fiberglass).
  - c. With regards to claim 16, Ramsey teaches using fiberglass with a length of 0.396 mm (abstract), 0.793 mm, and 3.99 mm (Table 1).

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- d. With regards to claim 17, Ramsey teaches using an average fiber diameter of 10-20 micrometers (abstract).
- e. With regards to claims 20 and 22, Ramsey teaches using carbon dioxide in an amount of 3 to 8% by weight of the polymer with 0 to 4% ethanol by weight of the polymer as a blowing agent (¶ 0018, last five lines of the paragraph).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramsey (Pub No 2003/0068485) as applied to claim 13 above, and further in view of Duncan (PN 4987179).

- a. With regards to claim 14, Ramsey as applied to claim 13 above teaches a method for forming a styrene-acrylonitrile foam board that includes filler.

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Ramsey does not teach that the styrene-acrylonitrile has an acrylonitrile content of 20 to 35% by weight.

b. Duncan teaches a method for making a liquid polymer polyol that contains polystyrene-acrylonitrile copolymer (abstract) that can be used in foams (col 4 ln 31-35). Duncan teaches that it is advantageous to use high amounts of polystyrene (PS) due to PS being cheaper than acrylonitrile and acrylonitrile has concerns of toxicity due to residual monomer (col 3 ln 21-37). Duncan teaches using PS in an amount of 67-90% by weight in the polymer (col 3 ln 46-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use acrylonitrile in a weight % of 20-35 in the polystyrene-acrylonitrile copolymer foam of Ramsey in process optimization of cost and health concerns due to residual monomer and price of acrylonitrile as taught by Duncan.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramsey (Pub No 2003/0068485) as applied to claim 13 above, and further in view of Alicke et al. (PN 5453454).

a. With regards to claim 18, Ramsey teaches a method for forming a styrene-acrylonitrile foam board that includes filler. Ramsey does not teach including 0.01-2.0% by weight talc.

b. Alicke teaches a method for making foam boards of styrene polymer (abstract) in which 0.51% by weight talc is included to regulate the cell size of the foam (col 3 ln 47-48). It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to include talc at 0.51% by weight as taught by Alicke to regulate cell size of the foam taught by Ramsey.

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramsey (Pub No 2003/0068485) as applied to claim 13 above, and further in view of Linton (PN 5024826).

a. With regards to claim 19, Ramsey teaches a method for forming a styrene-acrylonitrile foam board that includes filler. Ramsey teaches that optional additives including fillers can be added to obtain desired effects (§ 0019). Ramsey teaches forming an insect resistant foam (abstract). Ramsey does not teach that the particulate filler is of a particle size ranging from 0.1 to 1000 micrometers.

b. Linton teaches a method for making silica filler (abstract) for use in plastics (col 1 ln 10-14) that is apt for encapsulation of insecticides (col 1 ln 15-17). Linton teaches that the average particle diameter of the filler is 0.05 – 15 microns (col 2 ln 26-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the filler particles of Linton in the insect resistant foam of Ramsey as they are apt for use in plastics and can encapsulate insecticide.

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramsey (Pub No 2003/0068485) as applied to claim 13 above, and further in view of Reedy et al. (PN 5218006).

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- a. With regards to claim 21, Ramsey teaches a method for making a polystyrene foam board containing filler (abstract). Ramsey does not teach mixing two polymers, one with filler and one without filler, in the process.
- b. Reedy teaches a method for making polystyrene foam in which a masterbatch of polystyrene, filler, and blowing agent is formed followed by mixing further with polystyrene to produce a product with easier thermoforming (Example 1 col 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a masterbatch process as taught by Reedy in the process taught by Ramsey as doing so provides easier thermoforming, and Reedy and Ramsey use polystyrene containing filler (abstract of Ramsey, Example 1 of Reedy) with carbon dioxide as a blowing agent (§ 0018 of Ramsey, Example 1 of Reedy).

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 16, 17, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 16, 17, and 19, the phrase "when the filler" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). It is unclear whether the

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claim definitely requires the use of Filler A or Filler B to meet the limitations of the respective claims.

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GALEN HAUTH whose telephone number is (571)270-5516. The examiner can normally be reached on Monday to Thursday 7:30am-5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Yao can be reached on (571)272-1224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 25, 2008

/GHH/

/Naeem Haq/



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Supervisory Patent Examiner, Art Unit 4111